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ABSTRACT

The predictive power of the externalizing and internalizing factors of the Child Behavior Checklist (CBCL) for mental health treatment outcomes was studied. Data were collected over 3 years at a community mental health agency. From the population of intakes at the agency, 789 cases were selected as the unrestricted sample, and 374 of these were further analyzed as a restricted sample. Parents of these children completed the CBCL and each child was assessed by a clinician-assessor. In general, the theoretical construct that was tested was whether a specific factor of personality, extroversion or introversion, as represented by the CBCL's second order factors Externalizing and Internalizing, would manifest itself in a way that would give information about mental health treatment outcomes. The study indicated that externalizng/internalizing did relate to therapist-assessed gains after a period of treatment. Internalizers were judged to make significantly greater gains in mental health treatment than externalizers. There was not a significant relationship, however, in these samples between extroversion and introversion and two other outcomes hypothesized to relate to client personality factors. These outcomes were number of treatment sessions and therapist-assessed satisfactory treatment outcome versus abrupt or indeterminate termination. Thirty-seven appendixes present a global assessment of functioning continuum, the CBCL, coding entries, and tables of results for each hypothesis tested. (Contains 19 tables, 34 appendix tables, 2 figures, and 112 references.) (SLD)

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The Measurement of Externalizing/Internalizing on the CBCL: A Device for Early Detection and Intervention Strategies

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Purpose of the Study

The purpose of the study was to identify the predictive power of the Externalizing and Internalizing factors of the Child Behavior Checklist (CBCL) for mental health treatment outcomes. Information about the outcomes of treatment would be beneficial to a variety of professionals who work with up to a total of nine million youth each year who have been identified as having problems. Additionally, the study investigated the differential effects of sex, age, family income and problem severity as they interact with externalizing/internalizing in producing treatment outcomes. This information would serve to enhance understanding of how the CBCL-measured externalizing or internalizing might contribute to the success of mental health treatment. This approach also factored in other information about the children themselves (sex, age, problem severity) and their family circumstances (family income) in producing certain treatment outcomes. It was hoped that by including a variety of factors previously shown to influence mental health treatment outcomes in children, it would maximize understanding of what transpired in treatment, so that predictions could be made about who might benefit most by mental health treatment. This information might lead to fuller utilization of agency resources. Finally, the design of the study included assessment of children by both parents and clinicians. A clearer picture of effective treatment might be obtained by examining assessment data from both parents and clinicians in the analysis of the children's treatment. It has been widely shown that the links between families and social agencies (schools and community mental health agencies, for example) are key if children are to improve with the help that mental health treatment can provide (Kazdin, 1989, Reid, Kavanaugh & Baldwin, 1987, Stoughton & Williams, 1985).

Theoretical Framework

The trait-based personality theory of Cattell supports basic research that shows extroversion to be one of several essential, definable elements of human personality. Cattell's traits have been revealed via factor analyses of objectively-measured data to represent an inclusive picture of personality (Cattell & Schuerger, 1978). There has been substantial agreement that the number of these broad components or personality traits is five (Delamatre, 1995; Krug & Johns, 1986; McCrae & Costa, 1987; Schuerger & Allen, 1986). Other thinkers have also embraced the concept of extroversion. These include early Western philosophers, such as the ancient Greeks and Goethe, to Carl Jung, to contemporary cognitive psychologists who worked with H.J. Eysenck's idea that field-dependence related to extroversion (deLaszlo, 1959; Fine, 1991; McKenna, 1990; Mora, 1994). Given the fact that extroversion has been identified as a basic personality trait for adults, links have been made between its presence and the possibility that it is a significant factor in the mental health treatment approaches used to help individuals with mental health problems. Theoretical support

from both trait-based and traditional personality theorists has identified traits, such as extroversion, as possibly influencing mental health treatment and its outcomes (Cattell & Schuerger, 1989; Horney, 1945; Kaufman, 1989). While the present study focuses on only one personality trait, the investigators believed that with the large research support for extroversion as consistently identified and stable, its contribution to treatment outcomes would be substantial, especially when considered with other variables shown to have relevance in individuals' behaviors in given situations. If youth approach treatment experiences from an habitual extroverted or introverted attitude, as they do other life experiences, as Jung postulated for adults, there may be important manifestations in mental health treatment and in treatment outcomes.

Although these theories and the research in support of them have related mainly to adults, descriptive categorizations over the last five decades have targeted specifically the topics of youth's personality features and their psychological problems (Achenbach & Edelbrock, 1978). In its focus on youth, the present study built on the research that has described troubled youth using concepts of extroversion and introversion. Extroversion has been called "externalizing," "conduct problems," "aggressive," "undercontrolled," "acting out," "attention-getting," and "delinquent" (Achenbach, 1991; Achenbach & Edelbrock, 1978; Fischer, Rolf, Hasazi & Cummings, 1984; Hymel, Rubin, Rowden & LaMere, 1990). Introversion has been called "internalizing," "undersocialized," "overcontrolled," "personality problems/disorders," "withdrawn," "shy-anxious," "inhibited," and "emotional" (Achenbach, 1991; Achenbach & Edelbrock, 1978; Fischer et al., 1978; Fombonne, 1989; Hymel et al., 1990; Towle & Schwartz, 1987). As the research has evolved, researchers now widely use the Achenbach descriptors of "externalizing" and "internalizing" as part of his instrument, the CBCL (Achenbach, 1995; Freeman, 1985; Mooney, 1984). Extroversion/introversion, most commonly identified in youth studies as externalizing/internalizing, thus has relevance for the population of interest in this study, youth. Achenbach worked extensively with the identification of externalizing and internalizing. In the pre-1991 version of the CBCL (the instrument in use at the time that data for this study were collected), the second-order factor, Externalizing, included the following scales: boys, ages 6-11, Delinquent, Aggressive, Hyperactive; girls, ages 6-11, Cruel, Aggressive, Delinquent, Sex Problems, Hyperactive; boys, ages 12-16, Hyperactive, Aggressive Delinquent; and girls, ages 12-16, Cruel, Aggressive, Delinquent (Achenbach & Edlebrock, 1978). The second order factor, Internalizing, included the following scales: boys, ages 6-11, Schizoid or Anxious, Depressed, Uncommunicative, Obsessive-Compulsive, Somatic Complaints, girls, ages 6-11, Depressed, Social Withdrawal, Somatic Complaints, Schizoid-Obsessive; boys, ages 12-16, Somatic Complaints, Schizoid, Uncommunicative, Immature, Obsessive-Compulsive, and girls, ages 12-16, Anxious-Obsessive, Somatic Complaints, Schizoid, Depressed Withdrawal (Achenbach & Edelbrock, 1978). For practical purposes the post-1991 version of the CBCL has the feature of uniform scales across age groups and sexes, however, the essence of Externalizing and Internalizing has remained consistent(Achenbach, 1991).

While the literature suggests strong reasons for examining the extroversion/introversion variable and supports its measurement by the CBCL's

externalizing/internalizing, little has been done to demonstrate its usefulness in predicting mental health treatment outcomes.

Procedures

Data were collected over a three year time period, which involved a standard procedure at a community mental health agency. As part of the typical initial appointment procedure, parents (or parent-surrogates) were oriented to therapy for their children in groups of 3 to 15 parents. For parents without the fifth grade reading skills required for filling out the CBCL, staff were available for reading the items to parents and assisting them with filling out protocols. Using this procedure, data were routinely collected, along with demographic data, other personal data, and an initial Global Assessment of Functioning by a clinician-assessor. Further data were collected at termination of treatment. These included a post-treatment Global Assessment of Functioning score, summated number of individual, group and family treatment sessions attended, and termination code designation.

To most accurately depict the impact of variables that have been shown to relate to mental health treatment outcome, regression equations were written for data analyses. The use of regression allowed for combining possible predictive information that was in the form of both categorical data (sex, Externalizing/Internalizing), and continuous data (age, problem severity, family income), and to test for interactions among those variables. The test chosen to indicate significance of proposed relationships was the F test. It was chosen for its robustness, an important factor when violations of statistical assumptions about the data are possible, such as heterogeneity of variance, heteroscedasticity, skewness or abnormal kurtosis. Discriminant analysis provided comparisons of types of terminations. In these analyses, variables were examined to see if they distinguished between types of terminations.

Sample/Data Sources

The original sample pool of cases came from the population of intakes done at a child-serving, community mental health services agency in a large urban area of the midwestern United States. Between and including April 1991, and August 1993, there were 2718 cases of data collected, and then made available to the researcher. From that original sample pool, the study's criteria called for age restrictions and clinical levels of extroversion/introversion as measured by the Externalizing and Internalizing scales of the intake CBCL. These criteria reduced the pool of sample cases to N = 789. That sample of 789 was used to draw from to test the study's hypotheses. It has been identified as the Unrestricted sample. A second sample was a further reduction of this N = 789 sample. This further reduced sample met the age and clinical Externalizing/Internalizing requirements, but also excluded cases where the data on the criterion variables could be considered outliers. With this restriction, the second sample was based on N = 374, and this sample was also used to test hypotheses. It has been identified as the Restricted sample.

Reported findings in Table 1 are the data describing the various samples. The Ns for the Original, Selection criterion, Normal total sessions, Frequent termcode, and Both restricts samples were 2718, 789, 658, 454, and 374, respectively. The percentages of males in the samples ranged from 56.95% to 58.7%. The mean ages ranged from 10.68 to 11.19 years (SDs 3.14-3.43), and mean family income from $11,965 to $12,827 per year (SDs $13,796-$14,976). The mean pre-treatment Global Assessment of Functioning (GAF) scores were from 59.30 to 60.68 (SDs from 8.10-8.99), while the mean post-treatment GAF scores were from 63.85 to 65.78 (SDs from 10.13 to 10.97). (See Appendix 1, Global Assessment of Functioning Continuum.) The informants filling out the Child Behavior Checklists (CBCLs) were, by percentage of total, 84.5% to 87.3% "doneby" mothers, 6.6% to 7.5% "doneby" fathers, and 5.9% to 7.9% "doneby others. (See Appendix 2, Child Behavior Checklist for Ages 4-18.) Mean scores are reported for three CBCL variables: Total Externalizing (range 22.29-29.86, with SDs from 10.46-12.33); Total Internalizing (range 15.48-18.33, with SDs from 8.10-9.8); and Total Problems (range 57.88-68.26, with SDs from 13.65-28.59). A variable defined for the present study, based on clinical-range scores in Externalizing or Internalizing, designated by INTEXT, yielded sample ranges, by percentage of sample, from 41.0% to 42.2% Internalizers, and thus, 57.8% to 59% Externalizers. (See Table 1.)

As noted, Global Assessment of Functioning (GAF) data were collected at two points during the study. GAF gain scores were the difference, positive or negative, between the pre-treatment GAF scores (assigned by clinicians at their initial meeting with the children), and the post-treatment GAF scores (assigned by clinicians at termination).

Results

The results of the study answered the following research questions:

1. Is there a significant difference between Externalizing and Internalizing in predicting GAF gain scores of youth clients of mental health treatment?

2. Does Externalizing/Internalizing account for unique variance in predicting GAF gain scores of youth clients of mental health treatment, when controlling for other variables shown to influence treatment outcomes?

3. Does Externalizing/Internalizing interact with other variables shown to influence treatment outcomes of youth clients of mental health treatment in predicting GAF gain scores?

4. Is there a significant difference between Externalizing and Internalizing in predicting number of service events attended of youth clients of mental health treatment?

5. Does Externalizing/Internalizing account for unique variance in predicting the number of service events attended by youth clients of mental health treatment, when controlling for other variables shown to influence treatment outcomes?

6. Does Externalizing/Internalizing interact with other variables shown to influence treatment outcomes of youth clients of mental health treatment in predicting number of service events attended?

7. Does Externalizing/Internalizing differentiate between two types of treatment terminations for youth clients of mental health treatment?

8. Does Externalizing/Internalizing, above and beyond other variables shown to influence treatment outcomes of youth clients of mental health treatment, differentiate between two types of treatment terminations?

9. Does Externalizing/Internalizing interact with other variables shown to influence treatment outcomes of youth clients of mental health treatment, in differentiating between two types of treatment terminations?

Results Relating to GAF Gains

Findings in Table A are the data related to the testing of Hypothesis 1.1 for the Unrestricted sample, with GAF gain scores reported as interval data. For Hypothesis 1.1 with the Unrestricted sample, concerning the prediction of GAF gain scores by Internalizing/Externalizing, the results were not significant at $p = .028$ (Alpha is $\leq .05$, with the correction for multiple comparisons requiring a p value of $\leq .01$ for significance). Thus the data failed to support the hypothesis, and the researchers did not reject the null hypothesis. In other words, Externalizing/Internalizing was not significantly related to GAF gain scores reported as interval data for this unrestricted sample, considering the stated correction for multiple comparisons.

Findings in Table B present the testing of Hypothesis 1.1 for the Restricted sample, with GAF gain scores reported as interval data. For Hypothesis 1.1 with the Restricted sample, concerning the prediction of GAF gain scores by Externalizing/Internalizing, the results were significant at $p = .004$ (Alpha $\leq .05$ with a statistical correction for six comparisons). Thus the data supported the research hypothesis and the researchers rejected the null hypothesis. In other words, Externalizing/Internalizing was significantly related to GAF gain scores reported as interval data, for the Restricted sample, with correction made for multiple comparisons. The negative sign for the INTEXT variable representing Externalizing/Internalizing indicated that Internalizing was associated with significantly greater gain in Global Assessment of Functioning scores.

Table C presents the date related to the testing of Hypothesis 1.1 for the Unrestricted sample, with GAF gain scores reported as rank-ordered data. For Hypothesis 1.1 with the Unrestricted sample, concerning the prediction of GAF gain scores by Externalizing/ Internalizing, the results were significant at $p = .010$ (Alpha is $\leq .05$, with statistical correction for six comparisons). Thus the data supported the research hypothesis and the researchers rejected the null hypothesis. In other words, Externalizing/Internalizing was significantly related to GAF gain scores reported as rank-ordered data, for the Unrestricted sample, with correction for multiple comparisons. The negative INTEXT value indicated that Internalizing was associated with significantly greater gain in Global Assessment of Functioning scores.

Findings in Table D are the data related to the testing of Hypothesis 1.1 for the Restricted sample, with GAF gain scores reported as rank-ordered data. For Hypothesis 1.1 with the Restricted sample, concerning prediction of GAF gain scores by Externalizing/ Internalizing, the results were significant at $p = .0025$, with Alpha $\leq .05$, and statistical correction for six comparisons. Thus the data supported the

research hypothesis. The researchers rejected the null hypothesis. Internalizing was associated with greater gain in Global Assessment of Functioning.

Findings in Table E are the data related to the testing of Hypothesis 2.1 for the Unrestricted sample, with GAF gains reported as interval data. For Hypothesis 2.1 with the Unrestricted sample, concerning the prediction of GAF gain scores by Externalizing/Internalizing , the results were not significant at $p = .0512$ (Alpha is $\leq .05$, with the correction for six comparisons requiring a p value of $\leq .01$ for significance). Therefore, the data failed to support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, for the Unrestricted sample, with statistical correction for multiple comparisons, when covarying other variables shown to affect children's mental health treatment, Externalizing/Internalizing did not significantly predict the treatment outcome of interval-data GAF gain scores.

Findings in Table F present the testing of Hypothesis 2.1 for the Restricted sample, with GAF gains reported as interval data. For Hypothesis 2.1 with the Restricted sample, concerning the prediction of GAF gain scores by Externalizing/Internalizing, independent of demonstrated covariates for treatment outcomes, the result was significant at $p = .0100$. Therefore, the data supported the research hypothesis, and the researchers rejected the null hypothesis. The negative sign of the INTEXT variable indicated an association between Internalizing and higher GAF gain scores. In other words, for the Restricted sample, with statistical correction for six comparisons, Externalizing/Internalizing significantly predicted interval-data GAF gain scores, above and beyond the effects of demonstrated treatment outcome covariates. Internalizing was related to significantly greater GAF gain scores.

The findings in Table G present the testing of Hypothesis 2.1 for the Unrestricted sample, with GAF gains reported as rank-ordered data. For Hypothesis 2.1 with the Unrestricted sample, concerning the prediction of GAF gain scores by Externalizing/Internalizing, the results were not significant at $p = .0191$ (Alpha is $\leq .05$, with correction for six comparisons requiring a p value of $\leq .01$ for significance). Therefore, the data failed to support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, for the Unrestricted sample, with statistical correction for multiple comparisons, when covarying other variables shown to affect children's mental health treatment, Externalizing/Internalizing did not significantly predict the treatment outcome of rank-ordered GAF gain scores.

Findings in Table H present the testing of Hypothesis 2.1 for the Restricted sample, with GAF gains reported as rank-ordered data. For Hypothesis 2.1 with the Restricted sample, concerning the prediction of GAF gain scores by Externalizing/Internalizing, independent of demonstrated covariates for treatment outcomes, the results were significant at $p = .0067$. The data supported the research hypothesis, and the researchers rejected the null hypothesis. The negative value of the INTEXT variable indicated an association between Internalizing and higher GAF gain scores. In other words, for the Restricted sample, with statistical correction for six comparisons, Externalizing/Internalizing significantly predicted rank-ordered GAF gain scores, above and beyond the effects of demonstrated treatment outcome covariates, with Internalizing indicating greater GAF gains.

The findings relevant to Hypothesis 3.1 are presented in Appendices 4-7. Statistical corrections were made for six comparisons, which require a significant $p \leq$

.01. There were no significant results for either the Restricted or the Unrestricted samples, whether the GAF gains were presented as interval or rank-ordered data. Therefore, the data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, there were no significant interactions between sex and Externalizing/Internalizing in predicting GAF gain scores, considering correction for multiple comparisons.

The findings relevant to Hypothesis 3.2 are presented in Appendices 8-11. Statistical corrections were made for six comparisons, requiring a $p \leq .01$ for significance. There were no significant results for either the Unrestricted or the Restricted samples, whether the GAF gain scores were reported as interval or rank-ordered data. Therefore, the data did not support the research hypothesis, and the researches did not reject the null hypothesis. In other words, there were no significant interactions between age and Externalizing/Internalizing in predicting GAF gain scores, considering correction for multiple comparisons. One interaction, however, would have been significant without the correction for multiple comparisons. That was for the Unrestricted sample, the interaction of Externalizing/Internalizing and age.

The findings relevant to Hypothesis 3.3 had mixed results. In the Unrestricted samples, in using the data presented both as interval and rank-ordered data, there were significant results of the analyses at $p = .0030$ for the interval data, and $p = .0056$ for the rank-ordered data. These results are presented in Tables Ha and Hb. Therefore, for the Unrestricted samples, the data supported the research hypothesis, and the researchers rejected the null hypothesis. There was some evidence of interaction between family income and Externalizing/Internalizing in predicting GAF gains in the Unrestricted samples. The results for the Restricted sample data were not significant, and are presented in Appendices 12-13. In these instances, the data failed to support the research hypothesis, and the researchers did not reject the null hypothesis.

The findings relevant to Hypothesis 3.4 are presented in Appendices 14-17. With statistical correction for multiple comparisons, and thus a required $p \leq .01$, there were no significant results for either the Unrestricted or the Restricted samples, whether the GAF gains were presented as interval or rank-ordered data. Therefore, the data did not support the research hypothesis, and the researcher did not reject the null hypothesis. In other words, there were no significant interactions between problem severity and Externalizing/Internalizing in predicting GAF gain scores.

Results Relating to Total Number of Service Events

Findings in Table I and Table J are the data related to the testing of Hypothesis 4.1 for the Unrestricted and the Restricted samples, respectively. For Hypothesis 4.1 with the Unrestricted sample, concerning the prediction of number of service events attended, the results were not significant at $p = .8263$. For Hypothesis 4.1 with the Restricted sample, concerning the prediction of number of service events attended, the results were not significant at $p = .1316$. The data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, for both the Unrestricted and the Restricted samples, Externalizing/Internalizing did not significantly predict number of service events attended.

Findings in Table K present the data related to the testing of Hypothesis 5.1 for the Unrestricted sample. Table L pertains to the testing of Hypothesis 5.1 for the Restricted sample. The results were not significant with either sample, with $p = .8352$ for the Unrestricted sample, and $p = .1092$ for the Restricted sample. The data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, Externalizing/Internalizing did not significantly predict number of mental health treatment service events in either the Unrestricted or the Restricted sample, above and beyond the effects of treatment outcome covariates.

The findings relevant to Hypothesis 6.1 are presented in Appendices 18-19. Statistical corrections were made for six comparisons, which, based on Alpha of $p \leq .$, calculates to $p \leq .01$ for significance in this analysis. There were not significant results for either the Unrestricted or the Restricted sample. Therefore, the data did not support the research hypothesis, and the researchers did not reject the null hypothesis. This is to say, there were no significant interactions between sex and Externalizing/Internalizing in predicting number of service events attended in children's mental health treatment, in either Unrestricted or Restricted sample.

The findings relevant to Hypothesis 6.2 are presented in Appendices 20-21. With statistical correction for multiple comparisons, there were no significant results for either the Unrestricted or the Restricted sample. Therefore, the data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, there were no significant interactions between age and Externalizing/Internalizing in predicting number of children's mental health service events attended. As with the GAF gains criterion for the Unrestricted sample, there was a p value that would have been significant without the use of a correction formula.

The findings relevant to Hypothesis 6.3 are presented in Appendices 22-23. Applying a statistical correction formula for multiple comparisons, there were no significant results for either the Unrestricted or the Restricted sample. The data did not support the research hypothesis, and the researchers did not reject the null hypothesis. While there were no significant interactions between family income and Externalizing/Internalizing in predicting number of service events attended by children in mental health treatment in the Unrestricted sample, the interaction would have been significant without the correction for multiple comparisons.

Findings relevant to Hypothesis 6.4 are presented in Appendices 24-25. With statistical correction for multiple comparisons, there were no significant results in the analyses of the two samples, Unrestricted and Restricted. Therefore, the data did not support the research hypothesis. The researchers did not reject the null hypothesis. In other words, there were no interactions between problem severity and Externalizing/Internalizing in predicting number of service events attended.

Results Relating to Type of Treatment Termination

Findings in Table M and Table N are the data related to testing of Hypothesis 7.1 for the Unrestricted and the Restricted samples, respectively. For Hypothesis 7.1 with the Unrestricted sample, concerning the prediction of type of termination code, the results were not significant at $p = .1453$. For Hypothesis 7.1 with the Restricted sample, concerning type of termination code predicted, $p = .2565$, not significant. (A

statistical correction for multiple comparisons was applied in both instances) Therefore, the data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, for both the Unrestricted and the Restricted Externalizing/Internalizing did not predict type of termination.

Findings in Table O and Table P are the data related to the testing of Hypothesis 8.1 for the Unrestricted and the Restricted samples, respectively. For Hypothesis 8.1 with the Unrestricted sample, concerning distinguishing type of termination, the results were not significant at p = .1620. For Hypothesis 8.1 with the Restricted sample, the results were not significant at p = .5238. In both cases Alpha was corrected for multiple comparisons. The data did not support the research hypothesis, and the researchers did not reject the null hypothesis. This means that holding covariates constant, Externalizing/Internalizing did not significantly distinguish between two types of terminations for either the Unrestricted or the Restricted sample. In other words, Externalizinging/Internalizing did not significantly predict type of termination with covariates held constant. In fact, the relationship between Externalizing/Internalizing and the criterion was not consistent between samples.

The findings relevant to Hypothesis 9.1 are presented in Appendices 26-27. With statistical correction for multiple comparisons, there were no significant results for either the Unrestricted or the Restricted sample. The data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, there were no interactions between Externalizing/Internalizing and sex in distinguishing between two types of treatment terminations, in either the Unrestricted or the Restricted samples.

Findings relevant to Hypothesis 9.2 are presented in Appendices 28-29. With a statistical correction for multiple comparisons, there were no significant results in the analyses of the two samples, Unrestricted and Restricted. Therefore, the data did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, there were no interactions between Externalizing/ Internalizing and age in differentiating between types of termination codes for either sample.

Findings on the results of the analysis of testing Hypothesis 9.3 are presented in Appendices 30-31. Again, there were no significant results for either the Unrestricted or the Restricted sample. The data did not support the research hypothesis. The null hypothesis was not rejected. There are no interactions between Externalizing/Internalizing and family income in distinguishing between types of treatment termination.

Findings relevant to the testing of Hypothesis 9.4 are in the Appendices 30-31. With a statistical correction for multiple comparisons, there were no significant results in the analyses of either sample. The data, therefore, did not support the research hypothesis, and the researchers did not reject the null hypothesis. In other words, there were no interactions between Externalizing/Internalizing and problem severity in distinguishing type of treatment termination.

Post-Hoc Analyses

Post-hoc analyses were done in two areas related to the research study. These investigated (a) the independent significance of Externalizing/Internalizing where it

was found to be significantly related to the criterion variable, and (b) the two interactive effects found among the many interactions that were tested.

Tables Q and R present the data related to the significant effects of Externalizing/Internalizing on GAF gains. The GAF gain data were tested for significance with the other predictor variables, plus the two other criterion variables of this study, number of treatment sessions (TOTSESS) and type of termination code (TERMCODE). As recommended by Newman and MacNeil (1972), a method for partialing out the independent contribution of one criterion was used, which involved writing full regression models that include all predictor variables, plus the criterion variables not being isolated for effect, and testing to see if the focal predictor still shows a significant result for the criterion of interest. This would indicate unique variance accounted for by that criterion, independent of the other criterion variables.

Table Q indicates the results for the Restricted sample, with GAF gains reported as interval data. Externalizing/Internalizing was a significant predictor of GAF gains, independent of the total number of sessions and type of termination code with a p value of .002. Likewise, Table R indicates the results for the Restricted sample, in this case with GAF gains reported as rank-ordered data. The results were significant at $p = .001$. Externalizing/Internalizing was a significant predictor of GAF gains, reported as rank-ordered data, independent of the other criterion variables.

Post-hoc testing of the interaction of Externalizing/Internalizing and age in predicting GAF gains was done for the Unrestricted sample, which was identified as a nonsignificant result in the study, given the standard of correction for multiple comparisons, but close to significance without that correction. A possible interactive effect is not suggested for the Restricted sample. Figure 1 is a representation of plotting separate Internalizing and Externalizing by age in predicting GAF gains for the Unrestricted sample. It may be that Internalizers gain more in treatment at older ages, whereas, Externalizers gain more in treatment at younger ages. Likewise, the results in the post-hoc analysis for the Unrestricted sample for Externalizing/Internalizing and age in predicting total number of treatment sessions were analyzed. Figure 2 is a representation of plotting separate Internalizing and Externalizing by age in predicting total number of treatment sessions. Likewise, there may be a differential effect for age between Internalizers and Externalizers vis a vis number of sessions.

Because unexpected results arose from one set of interactions tests results, post-hoc analyses were run. There was an interaction indicated between the Externalizing/Internalizing variable (INTEXT), and the family income variable (FAMINC) for predicting GAF gains, with the Unrestricted, but not the Restricted sample. The range of the family income data was very great. The range was from $0.00 to $80,000.00 (Unrestricted sample $\underline{M}$ = $12,797, SD = $14,147) per year. Consequently, the data were rerun according to the standards used in the study to eliminate cases with outliers, here eliminating cases with outliers on the family income variable. This second analysis, which used the more typical cases of family income, which was set at $27,000.00 or less per year. The interaction tests were run with the same variables, the same methods of calculating GAF gain data, and with the same defined Unrestricted and Restricted samples as previously tested. In these analyses without the outliers for family income, there were no significant results of interaction between Externalizing/Internalizing and family income in predicting GAF gains. The p

values were .0143 and .0254 for the Unrestricted samples, interval and rank-ordered data, and .031 and .024 for the Restricted samples, interval and rank-ordered data. These results are presented in Appendices 34-37. Neither of these tests had significant results, with correction for multiple comparisons.

Implications of the Study

In general, the theoretical construct that was tested was whether a specific factor of children's personalities, extroversion or introversion, as represented by the CBCL's Externalizing or Internalizing second order factors, would manifest itself in such a way that it would give information about mental health treatment outcomes. The pieces of information about treatment outcomes in this study were data on Global Assessment of Functioning (GAF) gains, number of treatment sessions attended, and type of termination codes. This study indicated that Externalizing/Internalizing did relate to therapist-assessed gains after a period of treatment. This happened most definitively when the profile of the child and family's use of the treatment services follows the "usual" pattern of most clients utilizing the services, in an urban midwest community mental health services agency. As with the bulk of the prior research that indicates that Internalizers function better in various areas of their lives than do Externalizers, this study showed that Internalizers were judged to make significantly greater gains in mental health treatment than were Externalizers. There was not a significant relationship, however, in the samples tested between extroversion and introversion and two other outcomes hypothesized to relate to these client personality factors. These outcomes were number of treatment sessions and therapist-assessed satisfactory treatment termination versus abrupt or indeterminate termination.

Concerning the significant findings, Internalizers in the sample identified as "Restricted," in other words, users of the services most like other users of the services, had significantly higher GAF gain scores than externalizing children. This may indicate that there is a part of these children's tendency to internalize experience that makes them better able to utilize the services of mental health treatment for improvement with respect to their problems. Conversely, externalizing children may not internalize the treatment experience, and thus not generalize the "lessons" of therapeutic treatment to novel situations, thus not gaining adaptation skills. It may also indicate that as Massey and Murphy (1991) hypothesized that internalizing children are better tolerated by others than externalizing children are. This may help them earn higher GAF scores at termination from their clinician/assessors, or make their parents more willing to help them implement their treatment gains.

One related piece of data from this study, however, in this regard suggested an interesting relationship. Thirty-six Pearson correlations were run among the variables of this study, excluding variables created that were combinations of other variables or were somehow defined by other variables used. Of these thirty-six, there were only four instances of significant correlations. Among these four was a correlation of -.207 between the parent-assessed Total Problems scale of the CBCL, and the clinician-assessed Global Assessment of Functioning pre-treatment score (GAF_PRE). This indicates that some agreement exists between parent and clincian at the intake phase of

treatment, with lower parent-produced Total Problem scores associated with higher clinician-produced GAF_PRE scores (i.e., if fewer problems, assessed as higher functioning). If this in fact indicates that two independent sets of adults evaluated internalizers significantly differently than externalizers, this may support an argument set forth by Reid, Kavanaugh and Baldwin (1987). They said that despite the "truth" of a label for a child, if significant adults react to a child in a certain way, that is the information that the clinician needs to use in assisting the child to improved functioning.

A further point to consider regarding significant results produced in this study is concerning the samples that included "outliers" (Unrestricted) and that excluded outliers (Restricted) in terms of measured treatment outcomes. In all cases where there was a difference in producing significant results between the Unrestricted and the Restricted samples, it was the Restricted sample that produced the significant result. This was logical in that the users of treatment services who most closely follow the patterns of other users are the most "predictable." As the many and varied termination codes indicate (see Appendix 3), children and families who commenced treatment with community mental health treatment services were often more appropriate for services elsewhere, including social services, psychiatric services, drug treatment services and correctional institutions.

Regarding the more typical users of mental health treatment and number of sessions, there may be a phenomenon of misuse or over-use of treatment sessions. In extreme cases, families may come to use mental health treatments as "activity," respite, sheer habit, or to validate some insurance or social service agency requirement, and not really to use as a means for promoting a child's growth, change and improvement in problem areas. For these possible reasons, the restricted samples of more typical users of community mental health treatment produced more stable results for interpretation.

There may have been very valid nonsignificant results in the hypothesized areas of total number of sessions and type of termination codes relating to researchers' cautions about the difficulty of separating the effects of personal child characteristics from the systems of their families' functioning (Kazdin, 1989; Mann & Bourdin, 1991). A child may possess the personality traits to gain from treatment and continue coming, but the family may not have the desire to persevere in treatment that could be beneficial. The family could even react against one of its members improving, and stop treatment in an effort to maintain homeostasis. As noted, the family may have a different agenda in using mental health treatments that has little to do with the children and their personal characteristics. Or it may be that the personality trait of extroversion/introversion simply does not relate to continuing with treatment for children.

One argument against the latter possibility may lie in the information from this study regarding a correlation that was not a focus of testing. Matching some recent data on duration of treatment and satisfaction with treatment (VandenBos, 1996), this study showed a significant correlation between total number of sessions and GAF gains. This suggested that it may be that a greater number of sessions could lead to greater therapy gains for children shown to gain more from treatment, namely internalizers. But for unknown reasons, these sessions are not being attended significantly more by these children who might benefit by them.

Concerning types of termination, in this sample, it seems that this was not a definitive variable. As with total number of sessions, there may be countless, unknown features of leaving treatment abruptly (the Termcode 3 designation) that do not imply dissatisfaction with treatment. Families leave treatment for a myriad of reasons, even if inappropriate placement in outpatient sessions is excluded as a factor. The fact that this was the only variable investigated that did not at least show consistency of direction toward Internalizers versus Externalizers indicates it is a poor measure for how children's personality traits may manifest in treatment outcome.

In one of the three outcomes investigated, therefore, there was a significant effect, and in that, most consistently and powerfully when the families of the children treated used the treatment in a way most resembling "common" usage. GAF gains were significantly related to Internalizing versus Externalizing in child clients. It may be that this personality indicant, internalizing, is related to the ability to utilize mental health treatment services for effectively. In practical terms, however, the presence of this feature alone accounted for no more than two percent of the variance in GAF gains. While this should be viewed as pertinent data for clinicians to use in planning treatment strategies for individual children, it would not be recommended as a independent basis for distributing the services on an agency level. The fact that two other criteria for the study were not significantly related to this personality trait indicates that while it may be a key component of children's personalities, there are so many other factors that affect treatment results, that internalizing or externalizing does not impact the course of a child's mental health treatment that agency planning would benefit by using it as a yardstick.

Suggestions for Further Research

The picture of what produces successful mental health treatment for children is far from complete. While a key personality variable, extroversion, has been shown to impact significantly clinician-assessed therapeutic gains, it is only a small explanatory piece. Variables that account for a family's tendency to continue with attendance at treatment sessions need to be investigated. Also needed are investigations into when and why treatment termination occurs. It is not clear how to measure successful treatment. The question remains whether success should be measured by the clinician, the parent(s), the children themselves, or by some kind of family and/or child behavioral indicants. For instance, this study showed a significant relationship between clinicians' and parents' initial assessments of the children. A future study might explore whether the two groups were in agreement at the end of the treatment, as well as what the children themselves saw as the results of their treatment. Answers to these questions are increasingly in demand given the press for accountability in the present mental health care climate (Stroul, 1988).

The information provided by this study leads to some specific matters for future investigations. One identified personality variable, extroversion, has been shown to contribute unique variance with respect to clinician-assessed therapeutic gains after mental health treatment. One may wish to expand on this line of investigation to include assessment of other personality variables in children and test their individual and collective contributory effects on assessed gains in children's functioning.

There might be merit in further research to refine some of the concepts of the present study as they apply to more specific groups. For instance, different racial groups may have differing results relative to CBCL measurement concerns, as suggested by Latkovich (1996). The present study's results might be tested with samples of children with handicapping conditions, who might be mis-assessed and/or improperly placed in certain inappropriate treatment regimens. As this study did not factor in previously-treated versus never-treated children, future investigations might look into the possible effects of previous treatment regarding therapeutic gains for internalizing versus externalizing children. As clinician-assessed gains were a mainstay of this study and there was no information available to use to test rater effects, this would be a recommended line of further inquiry.

In several areas, the results of this study supported or responded to prior questions raised in treatment outcome research on children. These samples supported previous findings regarding extroversion/introversion, for instance. It was found that for clinical samples there was no interaction of extroversion/introversion and sex, as has been found with normative samples (Achenbach, 1991). This clinical sample supported that previous clinical sample finding. Regarding classification rates, and using a stringent criterion (clinical Externalizing or Internalizing = 2 SDs above the mean), this sample was like and unlike previously tested samples. It was like a previous clinical sample in its rate of classification, but not like the previous sample in the ratio of externalizers to internalizers (McArdle & Mattison, 1989). These relationships might be a topic for future study.

One important area that warrants further attention is that of age effects, and the focus of this study, extroversion and introversion throughout childhood and adolescence, in terms of stability as a personality trait. This study did not reveal any significant relationships between age and Externalizing and Internalizing. But of note were interactions that approached significance. These were that, for the larger samples only: (a)in predicting GAF gains, older internalizing children were associated with larger GAF gains, whereas younger externalizing children were associated with larger GAF gains; and, (b) in predicting number of treatment sessions, younger internalizers attended fewer sessions, whereas older externalizers attended fewer sessions. These nearly significant relationships need further testing.

Finally, one of the study's interactions that was tested in a post-hoc analysis suggests a point to be considered in future research. That is the effects of outliers in analysis of statistical results. In the case, an unanticipated effect was shown between family income and Externalizing/Internalizing in predicting GAF gains. Considering the large range in family income ($0 - $60,000), cases with outliers for family income were removed and the results rerun. This interactive effect disappeared. This raises the point of whether to include all cases when considering data, to get a more accurate "most typical" profile for statistical analysis or to include all possible cases. In fact, other results in this study showed more predictable treatment outcomes when the sample left out extremes. The effects and meaning of outlier data need further study.

Table 1

CBCL and Other Descriptive Data, Comparison of Samples

Sample description	N	Sex, % male	M age (SD)	M total, Internalizing (SD)	M total, Externalizing (SD)	INTEXT, % Internalizers	M Total Problem (SD)	M GAF_PRE* (SD)	M GAF_POST* (SD)	M FAMINC, $/year (SD)	DONEBY, % each source
Original	2718	56.9	10.68** (3.43)	15.48 (9.80)	22.29 (12.33)	n/a	57.88 (28.59)	60.68 (8.99)	65.78 (10.69)	un-available	1a = 84.5 2b = 07.5 3c = 07.9
Selection criterion (unrestricted)	789	57.8	11.19 (3.19)	18.30 (8.32)	26.75 (10.52)	42.2	68.26 (14.11)	59.36 (8.59)	64.11 (10.80)	12,797 (14,147)	1a = 86.9 2b = 06.6 3c = 06.5
Normal total sessions (restricted)	658	58.7	11.26 (3.25)	18.07 (8.31)	26.96 (10.73)	41.0	68.16 (14.28)	59.30 (8.58)	63.85 (10.97)	12,827 (14,976)	1a = 87.3 2b = 06.8 3c = 05.9
Frequent termcode (restricted)	454	57.5	10.94 (3.14)	18.33 (8.10)	26.41 (10.46)	42.7	67.56 (13.65)	59.97 (8.25)	65.84 (10.13)	11,965 (14,442)	1a = 85.9 2b = 06.7 3c = 07.4
Both restricts (restricted)	374	58.3	10.98 (3.16)	18.18 (8.18)	26.69 (10.63)	41.7	67.87 (13.92)	59.85 (8.10)	65.58 (10.31)	11,967 (13,796)	1a = 86.6 2b = 06.7 3c = 06.7

Note. *Clinician-assigned GAF scores, Pre- and Post-treatment; **Original sample included 5 year olds; 1a = CBCL done by mother, 2b = CBCL done by father, 3c = CBCL done by other.

Note. Original sample included cases with desired data from a total sample pool of a community mental health services agency, intake cases from April, 1991-August, 1993. Selection criterion sample data is from that Original sample, minus the cases where the age was younger than 6 or older than 17 and there was no clinical elevation of Externalizing/Internalizing. The data from the three other listed samples is from the Selection criterion sample, minus outliers in number of sessions, termination codes, and in both number of sessions and termination codes, respectively.

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Table A

Results for Hypothesis 1.1. Multiple Linear Regression Test of Hypothesis 1.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample With Gain Scores Reported as Interval Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 1.1 There is a significant difference between Externalizing and Internalizing in predicting GAF gain scores for youth clients of a community mental health center						
Full Model: V_CHNGAF = (6.186)U + (-1.97)INTEXT + E	.0139					
Restricted Model: V_CHNGAF = (5.046)U + E	0.000	1/342	.05	4.827	.028	NS

Note. Hypothesis 1.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, V_CHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table B

Results for Hypothesis 1.1: Multiple Linear Regression Test of Hypothesis 1.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample With Gain Scores Reported as Interval Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 1.1 There is a significant difference between Externalizing and Internalizing in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model: V_CHNGAF = (7.352)U + (-2.961)INTEXT + E	.041					
Restricted Model: V_CHNGAF = (5.707)U + E	0.000	1/196	.05	8.369	.004	S

Note. Hypothesis 1.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10. In this instance, the criterion variable , V_CHGAF (the designation for the GAF gain pre- to post treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table C

Results for Hypothesis 1.1: Multiple Linear Regression Test of Hypothesis 1.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample With Gain Scores Reported as Rank-Ordered Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 1.1 There is a significant difference between Externalizing and Internalizing in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model: RCHNGAF = (14.868)U + (-1.81)INTEXT + E	.019					
Restricted Model: RCHNGAF = (13.819)U + E	0.000	1/342	.05	6.648	.010	S

Note. Hypothesis 1.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, RCHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as rank-ordered data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table D

Results for Hypothesis 1.1: Multiple Linear Regression Test of Hypothesis 1.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample With Gain Scores Reported as Rank-Ordered Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 1.1 There is a significant difference between Externalizing and Internalizing in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model: RCHNGAF = (15.68)U + (-2.709)INTEXT + E	.045					
Restricted Model: RCHNGAF = (14.176)U + E	0.000	1/196	.05	9.349	.0025	S

Note. Hypothesis 1.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10. In this instance, the criterion variable , RCHGAF (the designation for the GAF gain pre- to post treatment) was reported as rank-ordered data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table E

Results for Hypothesis 2.1: Multiple Linear Regression Test of Hypothesis 2.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample With Gain Scores Reported as Interval Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 2.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model:						
V_CHNGAF = (6.879)U + (-1.842)INTEXT + (-.450)SEX + (.175)AGE + (.000)FAMINC + (-.042)TOTPROB + E	.0346					
Restricted Model:						
VCHNGAF = (6.522)U + (-.426)SEX + (.150)AGE + (.000)FAMINC + (-.050)TOTPROB + E	.0231	1/321	.05	3.830	.0512	NS

Note. Hypothesis 2.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, V_CHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table F

Results for Hypothesis 2.1: Multiple Linear Regression Test of Hypothesis 2.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample With Gain Scores Reported as Interval Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 2.1: Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model: V_CHNGAF = (5.846)U + (-2.722)INTEXT + (-.828)SEX + (.103)AGE + (.000)FAMINC + (.010)TOTPROB + E	.0576					
Restricted Model: V_CHNGAF = (5.585)U + (-.927)SEX + (.053)AGE + (.000)FAMINC + (-.001)TOTPROB + E	.0253	1/192	.05	6.578	.010	S

Note. Hypothesis 2.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10. In this instance, the criterion variable , V_CHGAF (the designation for the GAF gain pre- to post treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table G

Results for Hypothesis 2.1: Multiple Linear Regression Test of Hypothesis 2.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample With Gain Scores Reported as Rank-Ordered Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 2.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model:						
RCHNGAF = (16.182)U + (-1.736)INTEXT + (-.595)SEX + (.140)AGE + (.000)FAMINC + (-.039)TOTPROB + E	.0420					
Restricted Model:						
RCHNGAF = (14.367)U + (-.785)SEX + (.051)AGE + (.000)FAMINC + (-.006)TOTPROB + E	.0232	1/321	05	5.544	.0191	NS

Note. Hypothesis 2.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, RCHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table H

Results for Hypothesis 2.1: Multiple Linear Regression Test of Hypothesis 2.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample With Gain Scores Reported as Rank-Ordered Data

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 2.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting GAF gain scores for youth clients of a community mental health center.						
Full Model:						
RCHNGAF = (14.608)U + (-2.520)INTEXT + (-.693)SEX + (.098)AGE + (.000)FAMINC + (-.004)TOTPROB + E	.0600					
Restricted Model:						
RCHNGAF = (15.846)U + (-.572)SEX + (.116)AGE + (.000)FAMINC + (-.046)TOTPROB + E	.0255	1/192	.05	7.510	.0067	S

Note. Hypothesis 2.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10. In this instance, the criterion variable , RCHGAF (the designation for the GAF gain pre- to post treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table Ha

Results for Hypothesis 3.3 Multiple Linear Regression Test of Hypothesis 3.3, Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Test	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: V_CHNGAF = (4.511)U + (-.825)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	0515					
Test INFAMINC = EXFAMINC		1/323	.05	8.936	.003	S

Note. Hypothesis 3.3 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years, (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, V_CHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as interval data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table Hb

Results for Hypothesis 3.3 Multiple Linear Regression Test of Hypothesis 3.3, Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Unrestricted Sample

Hypothesis and Test	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: RCHNGAF = (13.274)U + (-.198)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	.0526					
Test INFAMINC = EXFAMINC		1/323	.05	7.780	.0056	S

Note. Hypothesis 3.3 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables. In this instance, RCHNGAF (the designation for the GAF gain, pre- to post-treatment) was reported as rank-ordered data.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table 1

Results for Hypothesis 4.1: Multiple Linear Regression Test of Hypothesis 4.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 4.1 There is a significant difference between Externalizing and Internalizing in predicting number of service events attended for youth clients of a community mental health center.						
Full Model:						
TOTSESSN = (18.495)U + (-.463)INTEXT + E	.0001					
Restricted Model:						
TOTSESSN = (18.227)U + E	0.000	1/718	.05	.0482	.8263	NS

Note. Hypothesis 4.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table J

Results for Hypothesis 4.1: Multiple Linear Regression Test of Hypothesis 4.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 4.1 There is a significant difference between Externalizing and Internalizing in predicting GAF gain scores for youth clients of a community mental health center						
Full Model:						
TOTSESSN = (9.288)U + (-1.132)INTEXT + E	.0061					
Restricted Model:						
TOTSESSN = (8.628)U + E	0.000	1/372	.05	2.283	.1316	NS

Note. Hypothesis 4.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table K

Results for Hypothesis 5.1: Multiple Linear Regression Test of Hypothesis 5.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 5.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting number of service events attended for youth clients of a community mental health center.						
Full Model:						
TOTSESSN = (27.454)U + (-.443)INTEXT + (1.455)SEX + (-.701)AGE + (.000)FAMINC + (-.032)TOTPROB + E	.0088					
Restricted Model:						
TOTSESSN = (27.320)U + (1.454)SEX + (-.702)AGE + (.000)FAMINC + (-.034)TOTPROB + E	.0087	1/721	.05	.0433	.8352	NS

Note. Hypothesis 5.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table L

Results for Hypothesis 5.1: Multiple Linear Regression Test of Hypothesis 5.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 5.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting number of service events attended for youth clients of a community mental health center.						
Full Model:						
TOTSESSN = (12.061)U + (-1.226)INTEXT + (-.090)SEX + (-.258)AGE + (.000)FAMINC + (-.009)TOTPROB + E	.0252					
Restricted Model:						
TOTSESSN = (11.852)U + (-.116)SEX + (-.269)AGE + (.000)FAMINC + (-.003)TOTPROB + E	.0184	1/368	.05	2.577	.1092	NS

Note. Hypothesis 5.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table M

Results for Hypothesis 7.1. Multiple Linear Regression Test of Hypothesis 7.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 7.1 Externalizing/Internalizing will differentiate between Termcode 3 and Termcode 10 terminations for youth clients of a community mental health center.						
Full Model:						
TERMCODE = (8.737)U + (1.758)INTEXT + E	.0030					
Restricted Model:						
TERMCODE = (9.751)U + E	0.000	1/718	.05	2.125	.1453	NS

Note. Hypothesis 7.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table N

Results for Hypothesis 7.1: Multiple Linear Regression Test of Hypothesis 7.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 7.1 Externalizing/Internalizing will differentiate between Termcode 3 and Termcode 10 terminations for youth clients of a community mental health center.						
Full Model:						
TERMCODE = (4.794)U + (-.349)INTEXT + E	.0035					
Restricted Model:						
TERMCODE = (4.590)U + E	0.000	1/372	.05	1.291	.2565	NS

Note. Hypothesis 7.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table O

Results for Hypothesis 8.1: Multiple Linear Regression Test of Hypothesis 8.1 (Full Model) Against the Null Hypothesis (Restricted Model), Unrestricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 8.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in differentiating between Termcode 3 and Termcode 10 terminations for youth clients of a community mental health center.						
Full Model:						
TERMCODE = (3.733)U + (1.693)INTEXT + (-2.694)SEX + (.435)AGE + (-.000)FAMINC + (.046)TOTPROB + E	.0210					
Restricted Model:						
TERMCODE = (4.244)U + (-2.69)SEX + (.439)AGE + (.000)FAMINC + (.053)TOTPROB + E	.0183	1/714	.05	1.959	.1620	NS

Note. Hypothesis 8.1 was tested on the Selection criterion sample, derived from the larger pool of Original sample subjects, where three conditions were met: (1) the age could not be less than 6 years or greater than 17 years; (2) there must be a clinical-range score in Externalizing or Internalizing, and (3) cases must have all pieces of relevant data for listed variables.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table P

Results for Hypothesis 8.1. Multiple Linear Regression Test of Hypothesis 8.1 (Full Model) Against the Null Hypothesis (Restricted Model), Restricted Sample

Hypothesis and Models	R2	df	Alpha	F	p	Sig*
Hypothesis 8.1 Externalizing/Internalizing accounts for significant variance over and above what can be accounted for by sex, age, family income and problem severity in predicting number of service events attended for youth clients of a community mental health center.						
Full Model:						
TERMCODE = (4.885)U + (-.199)INTEXT + (-.215)SEX + (-.026)AGE + (-.000)FAMINC + (.000)TOTPROB + E	.0297					
Restricted Model:						
TERMCODE = (4.851)U + (-.219)SEX + (-.027)AGE + (.000)FAMINC + (-.000)TOTPROB + E	.0286	1/368	.05	.4073	.5238	NS

Note. Hypothesis 8.1 was tested on the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table Q

Results of Post-Hoc Analysis, Test of Effects of Externalizing/Internalizing on GAF Gains Interval-Reported Data, Independent of Effects of Other Criterion Variables, Restricted Sample

Full and Restricted Models*	R2	df	Alpha	F	p	Sig*
Full Model:						
V_CHNGAF = (-2.384)U + (-2.867)INTEXT + (-.600)SEX + (.245)AGE + (.000)FAMINC + (.011)TOTPROB + (.180)TOTSESSN + (1.06)TERMCODE + E	.291					
Restricted Model:						
V_CHNGAF = (-2.687)U + (-.702)SEX + (.193)AGE + (.000)FAMINC + (-.000)TOTPROB + (.190)TOTSESSN + (1.04)TERMCODE + E	.0255	1/190	.05	9.568	.002	S

Note The post-hoc analysis tested the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

Table R

Results of Post-Hoc Analysis, Test of Effects of Externalizing/Internalizing on GAF Gains Rank-Ordered Data,
Independent of Effects of Other Criterion Variables, Restricted Sample

Full and Restricted Models	R2	df	Alpha	F	p	Sig*
Full Model:						
RCHNGAF = (7.389)U + (-2.646)INTEXT + (-.495)SEX + (.222)AGE + (.000)FAMINC + (.005)TOTPROB + (.160)TOTSESSN + (.932)TERMCODE + E	.297					
Restricted Model:						
RCHNGAF = (7.108)U + (-.587)SEX + (.174)AGE + (.000)FAMINC + (-.005)TOTPROB + (.169)TOTSESSN + (.915)TERMCODE + E	.257	1/190	.05	10.92	.001	S

Note. The post-hoc analysis tested the Both restricts sample, derived from the Selection criterion sample, with the following additional conditions required: the number of total sessions had to be fewer than 29, and the termcode had to be designated Termcode 3 or Termcode 10.

*While the Alpha level is $p < .05$, there is a correction for multiple comparisons, which in this set of tests of hypotheses requires a p of .01 for significant effect.

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APPENDIX I

GLOBAL ASSESSMENT OF FUNCTIONING CONTINUUM

Code	
90 | 81	Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).
80 | 71	If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in school work).
70 | 61	Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.
60 | 51	Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with co-workers).
50 | 41	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).
40 | 31	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).
30 | 21	Behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).
20 | 11	Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death, frequently violent, manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).
10 | 1	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

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APPENDIX 1

GLOBAL ASSESSMENT OF FUNCTIONING CONTINUUM

Code	
90 | 81	Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).
80 | 71	If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in school work).
70 | 61	Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.
60 | 51	Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with co-workers).
50 | 41	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).
40 | 31	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).
30 | 21	Behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).
20 | 11	Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death, frequently violent, manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).
10 | 1	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

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APPENDIX 2

CHILD BEHAVIOR CHECKLIST FOR AGES 4-18

CHILD BEHAVIOR CHECKLIST FOR AGES 4-18

For office use only
ID #

CHILD'S NAME

SEX ☐ Boy ☐ Girl

AGE

ETHNIC GROUP OR RACE

TODAY'S DATE
mo. _____ Date _____ Yr. _____

CHILD'S BIRTHDATE
mo. _____ Date _____ Yr. _____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the spaces provided on page 2.

PARENTS' USUAL TYPE OF WORK, even if not working now. (Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, sales operator, shoe salesman, army sergeant.)

FATHER'S TYPE OF WORK: _____

MOTHER'S TYPE OF WORK: _____

THIS FORM FILLED OUT BY:

☐ Mother (name): _____

☐ Father (name): _____

☐ Other — name & relationship to child: _____

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

a. _____
b. _____
c. _____

Compared to others of the same age, about how much time does he/she spend in each?

	Don't Know	Less Than Average	Average	More Than Average
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

Compared to others of the same age, how well does he/she do each one?

	Don't Know	Below Average	Average	Above Average
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, singing, etc. (Do not include listening to radio or TV.)

☐ None

a. _____
b. _____
c. _____

Compared to others of the same age, about how much time does he/she spend in each?

	Don't Know	Less Than Average	Average	More Than Average
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

Compared to others of the same age, how well does he/she do each one?

	Don't Know	Below Average	Average	Above Average
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

☐ None

a. _____
b. _____
c. _____

Compared to others of the same age, how active is he/she in each?

	Don't Know	Less Active	Average	More Active
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

☐ None

a. _____
b. _____
c. _____

Compared to others of the same age, how well does he/she carry them out?

	Don't Know	Below Average	Average	Above Average
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

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V. 1. About how many close friends does your child have? ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more
(Do not include brothers & sisters)

2. About how many times a week does your child do things with any friends outside of regular school hours? ☐ Less than 1 ☐ 1 or 2 ☐ 3 or more
(Do not include brothers & sisters)

VI. Compared to others of his/her age, how well does your child:

	Worse	About Average	Better	
a. Get along with his/her brothers & sisters?	☐	☐	☐	☐ Has no brothers or sisters
b. Get along with other kids?	☐	☐	☐	
c. Behave with his/her parents?	☐	☐	☐	
d. Play and work by himself/herself?	☐	☐	☐	

VII. 1. For ages 6 and older – performance in academic subjects. If child is not being taught, please give reason _____

	Failing	Below average	Average	Above average
a. Reading, English, or Language Arts	☐	☐	☐	☐
b. History or Social Studies	☐	☐	☐	☐
c. Arithmetic or Math	☐	☐	☐	☐
d. Science	☐	☐	☐	☐
Other academic subjects – for example: computer courses, foreign language, business. Do *not* include gym, shop, driver's ed., etc. e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

2. Is your child in a special class or special school? ☐ No ☐ Yes – what kind of class or school?

3. Has your child repeated a grade? ☐ No ☐ Yes – grade and reason

4. Has your child had any academic or other problems in school? ☐ No ☐ Yes – please describe

When did these problems start?

Have these problems ended? ☐ No ☐ Yes – when?

Does your child have any illness, physical disability, or mental handicap? ☐ No ☐ Yes – please describe

What concerns you most about your child?

Please describe the best things about your child:

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Below is a list of items that describe children and youth. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 1. Acts too young for his/her age
0 1 2 2. Allergy (describe): _____
_____
0 1 2 3. Argues a lot
0 1 2 4. Asthma
0 1 2 5. Behaves like opposite sex
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Day-dreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Eats or drinks things that are not food — don't include sweets (describe): _____
_____
0 1 2 29. Fears certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe): _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe _____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired
0 1 2 55. Overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains (not headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (describe): _____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____
Please see other si

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0 = Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____

0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much

0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy

0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids

0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____

0 1 2 67. Runs away from home
0 1 2 68. Screams a lot

0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe): _____

0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires

0 1 2 73. Sexual problems (describe): _____

0 1 2 74. Showing off or clowning

0 1 2 75. Shy or timid
0 1 2 76. Sleeps less than most kids

0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____

0 1 2 78. Smears or plays with bowel movements

0 1 2 79. Speech problem (describe): _____

0 1 2 80. Stares blankly

0 1 2 81. Steals at home
0 1 2 82. Steals outside the home

0 1 2 83. Stores up things he/she doesn't need (describe): _____

0 1 2 84. Strange behavior (describe): _____

0 1 2 85. Strange ideas (describe): _____

0 1 2 86. Stubborn, sullen, or irritable

0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot

0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language

0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe): _____

0 1 2 93. Talks too much
0 1 2 94. Teases a lot

0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much

0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking

0 1 2 99. Too concerned with neatness or cleanliness
0 1 2 100. Trouble sleeping (describe): _____

0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy

0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud

0 1 2 105. Uses alcohol or drugs for nonmedical purposes (describe): _____

0 1 2 106. Vandalism

0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed

0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex

0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries

113. Please write in any problems your child has that were not listed above:

0 1 2 _____

0 1 2 _____

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APPENDIX 3

AKRON CHILD GUIDANCE CENTER

CODE TABLE ENTRIES 11/12/93 PAGE 1

TABLE NO 117 TABLE NAME REASONS FOR DISCHARGE

CODE	DESCRIPTION	ACTIVE/INACT	ALT 1	ALT 2	ALT 3
01	FACILITY NOTIFIED-MOVED, DIED	ACTIVE			
02	FACILITY NOTIFIED-OTHR REASONS	ACTIVE			
03	FACILITY NOT NOTIFIED	ACTIVE			
10	FURTHER CARE NOT INDICATED NOW	ACTIVE			
11	ADD. FAC. SVC. NEEDED NOT AVAL	ACTIVE			
12	COMM. RESORC NEEDED NOT AVAIL	ACTIVE			
13	COMM. RESORC/PAT OR FAM N/READ	ACTIVE			
14	ADD FAC SVCS-PAT/FAM NOT READY	ACTIVE			
21	PRIVATE MENTAL HOSPITAL	ACTIVE			
22	PUBLIC MENTAL HOSPITAL	ACTIVE			
23	PSYCH SVC OF GEN HOSPITAL	ACTIVE			
24	RESID TREAT CNTR FOR CHILDREN	ACTIVE			
25	TRAINING SCHOOL FOR MR, EPILEP	ACTIVE			
26	PSYCHIATRIC NURSING HOME	ACTIVE			
27	OTH PSYCH INPATIENT FACILITY	ACTIVE			
31	PRIVATE PSYCHIATRIST	ACTIVE			
32	OUTPATIENT PSYCHIATRIC CLINIC	ACTIVE			
33	PSYCHIATRIC DAY CARE CENTER	ACTIVE			
34	COMMUNITY SUPPORT SERVICES	ACTIVE			
35	PORTAGE PATH CMHC	ACTIVE			
41	PRIVATE PHYSICIAN	ACTIVE			
42	LOCAL HEALTH DEPARTMENT	ACTIVE			
43	GENERAL HOSPITAL	ACTIVE			
44	NURSING HOME	ACTIVE			
46	EDWIN SHAW HOSPITAL	ACTIVE			
47	INTERVAL BROTHERHOOD HOME	ACTIVE			
48	COMMUNITY DRUG BOARD	ACTIVE			
49	OTHER MEDICAL/HEALTH AGNCY,NUR	ACTIVE			
51	PRIVATE PSYCHOLOGIST	ACTIVE			
59	OTHER PSYCHOLOGICAL SERVICES	ACTIVE			
60	SOCIAL SERVICE AGENCY	ACTIVE			
61	FAMILY SVCS OF SUMMIT COUNTY	ACTIVE			
62	N.E. FAMILY SERVICES	ACTIVE			
63	CHILDREN'S SERVICES BOARD	ACTIVE			
70	COURT, CORRECTIONAL INSTIT,ETC	ACTIVE			
71	SUMMIT COUNTY JUVENILE COURT	ACTIVE			
72	DEPT OF YOUTH SERVICES	ACTIVE			
80	SCHOOL	ACTIVE			
91	CLERGY	ACTIVE			
92	ALCOHOLICS ANONYMOUS	ACTIVE			
93	VOCATIONAL REHABILITATION	ACTIVE			
94	EMPLOYMENT SERVICE, EMPLOYER	ACTIVE			
95	BOARDING CARE HOME FOR AGED	ACTIVE			
98	OTHER	ACTIVE			
99	UNKNOWN	ACTIVE			

((((((((((END OF DATA CODE TABLE))))))))))

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APPENDIX 4

RESULTS OF HYPOTHESIS 3.1, INTERVAL DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting GAF gain scores.						
Model: V_CHGAF = (3.763)U + (2.248)MIN + (.849)MEX + (2.649)FIN + E	.0157					
Test: MIN - FIN = MEX - FEX		1/340	.05	.478	.489	NS

APPENDIX 5

RESULTS OF HYPOTHESIS 3.1, INTERVAL DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting GAF Gain Scores Reported as Interval Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting GAF gain scores.						
Model: V_CHGAF = (3.673)U (3.882)MIN + (1.361)MEX + (3.356)FIN + E	.0464					
Test: MIN - FIN = MEX - FEX		1/194	.05	.160	.689	NS

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APPENDIX 6

RESULTS OF HYPOTHESIS 3.1, RANK-ORDERED DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting GAF gain scores.						
Model: RCHGAF = (12.806)U (2.242)MIN + (.467)MEX + (1.828)FIN + E	.0202					
Test: MIN - FIN = MEX - FEX		1/340	.05	.0014	.97	NS

APPENDIX 7

RESULTS OF HYPOTHESIS 3.1, RANK-ORDERED DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.1 Test of the Interaction of Externalizing/Internalizing and Sex in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting GAF gain scores.						
Model: RCHGAF = (12.480)U (3.463)MIN + (.933)MEX + (2.783)FIN + E	.0498					
Test: MIN - FIN = MEX - FEX		1/194	.05	.0197	.888	NS

APPENDIX 8

RESULTS OF HYPOTHESIS 3.2, INTERVAL DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting GAF gain scores.						
Model: V_CHGAF = (5.813)U (-4.522)IN + (.446)INAGE + (-.446)EXAGE + (-.137) + E	.029					
Test: INAGE = EXAGE		1/340	.05	4.378	.037	NS

APPENDIX 9

RESULTS OF HYPOTHESIS 3.2, INTERVAL DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting GAF Gain Scores Reported as Interval Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting GAF gain scores.						
Model: V_CHGAF = (4.238)U (1.093)IN + (.186)INAGE + (.013)EXAGE + E	.0440					
Test: INAGE = EXAGE		1/194	.05	.278	.598	NS

APPENDIX 10

RESULTS OF HYPOTHESIS 3.2, RANK-ORDERED DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting GAF gain scores.						
Model: RCHGAF = (13.745)U (-2.058)IN + (.290)INAGE + (-.059)EXAGE + E	.0288					
Test: INAGE = EXAGE		1/340	.05	2.532	.112	NS

APPENDIX 11

RESULTS OF HYPOTHESIS 3.2, RANK-ORDERED DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting GAF gain scores.						
Model: RCHGAF = (12.317)U (1.960)IN + (.129)INAGE + (.056)EXAGE + E	.0479					
Test: INAGE = EXAGE		1/194	.05	.066	.797	NS

APPENDIX 12

RESULTS OF HYPOTHESIS 3.3, INTERVAL DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Interval Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: V_CHGAF = (4.380)U (1.312)IN + (.000)INFAMINC + (.000)EXFAMINC + E	.0613					
Test: INFAMINC = EXFAMINC		1/194	.05	1.786	.182	NS

APPENDIX 13

RESULTS OF HYPOTHESIS 3.3, RANK-ORDERED DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: RCHGAF = (12.997)U (1.343)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	.0632					
Test: INFAMINC = EXFAMINC		1/194	.05	1.670	.197	NS

APPENDIX 14

RESULTS OF HYPOTHESIS 3.4, INTERVAL DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.4: Test of the Interaction of Externalizing/Internalizing and Total Problems in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in predicting GAF gain scores.						
Model: V_CHGAF = (9.104)U (-4.579)IN + (.025)INTOTPROB + (-.071)EXTOTPROB + E	.0231					
Test: INTOTPROB = EXTOTPROB		1/340	.05	2.120	.146	NS

APPENDIX 15

RESULTS OF HYPOTHESIS 3.4, INTERVAL DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.4: Test of the Interaction of Externalizing/Internalizing and Total Problems in Predicting GAF Gain Scores Reported as Interval Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in predicting GAF gain scores.						
Model: V_CHGAF = (3.673)U (3.244)IN + (.006)INTOTPROB + (.010)EXTOTPROB + E	.0412					
Test: INTOTPROB = EXTOTPROB		1/194	.05	.002	.960	NS

APPENDIX 16

RESULTS OF HYPOTHESIS 3.4, RANK-ORDERED DATA, UNRESTRICTED SAMPLE

Results for Hypothesis 3.4: Test of the Interaction of Externalizing/Internalizing and Total Problems in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.4 There is a significant interaction between Externalizing/ Internalizing and problems severity in predicting GAF gain scores.						
Model: RCHGAF = (16.599)U (-1.851)INTOTPROB + (-.051)EXTOTPROB + E	.0262					
Test: INTOTPROB = EXTOTPROB		1/340	.05	1.047	.306	NS

APPENDIX 17

RESULTS OF HYPOTHESIS 3.4, RANK-ORDERED DATA, RESTRICTED SAMPLE

Results for Hypothesis 3.4: Test of the Interaction of Externalizing/Internalizing and Total Problems in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in predicting GAF gain scores.						
Model: RCHGAF = (13.004)U (2.137)IN + (.008)INTOTPROB + (- 000)EXTOTPROB + E	.0457					
Test: INTOTPROB = EXTOTPROB		1/194	.05	.017	.895	NS

APPENDIX 18

RESULTS OF HYPOTHESIS 6.1, UNRESTRICTED SAMPLE

Results for Hypothesis 6.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting Number of Service Events, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting Number of service events attended.						
Model: TOTSESSN = (18.994)U (-.202)MIN + (-1.708)MEX + (-.808)FIN + E	0001					
Test: MIN - FIN = MEX - FEX		1/716	05	314	575	NS

APPENDIX 19

RESULTS OF HYPOTHESIS 6.1, RESTRICTED SAMPLE

Results for Hypothesis 6.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting Number of Service Events, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.1 There is a significant interaction between Externalizing/ Internalizing and sex in predicting number of service events attended.						
Model: TOTSESSN = (8.263)U (1.336)MIN + (-.189)MEX + (.540)FIN + E	.0074					
Test: MIN - FIN = MEX -FEX		1/370	.05	.416	.519	NS

APPENDIX 20

RESULTS OF HYPOTHESIS 6.2, UNRESTRICTED SAMPLE

Results for Hypothesis 6.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting Number of Service Events, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting number of service events attended.						
Model: TOTSESSN = (32.776)U (-15.461)IN + (.105)INAGE + (-1.304)EXAGE + E	.0127					
Test: INAGE = EXAGE		1/716	05	4.53	033	NS

APPENDIX 21

RESULTS OF HYPOTHESIS 6.2 ,RESTRICTED SAMPLE

Results for Hypothesis 6.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting Number of Service Events, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting number of service events attended.						
Model: TOTSESSN = (11.511)U (.145)IN + (-.219)INAGE + (-.301)EXAGE + E	.020					
Test: INAGE = EXAGE		1/370	.05	.118	.730	NS

APPENDIX 22

RESULTS OF HYPOTHESIS 6.3, UNRESTRICTED SAMPLE

Results for Hypothesis 6.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting Number of Service Events, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting number of service events attended.						
Model: TOTSESSN = (17.868)U (3.687)IN + (- 000)INFAMINC + (.000)EXFAMINC + E	.0057					
Test: INFAMINC = EXFAMINC		1/716	.05	2.615	106	NS

APPENDIX 23

RESULTS OF HYPOTHESIS 6.3, RESTRICTED SAMPLE

Results for Hypothesis 6.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting Number of Service Events, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting number of service events attended.						
Model: TOTSESSN = (8.122)U (2.341)IN + (-.000)INFAMINC + (.000)EXFAMINC + E	0183					
Test: INFAMINC = EXFAMINC		1/370	.05	2.490	.115	NS

APPENDIX 24

RESULTS OF HYPOTHESIS 6.4,UNRESTRICTED SAMPLE

Results for Hypothesis 6.4: Test of the Interaction of Externalizing/Internalizing and Problem Severity Number of Service Events, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in predicting number of service events attended.						
Model: TOTSESSN = (21.830)U (-2.417)IN + (-.013)INTOTPROB + (-.054)EXTOTPROB- + E	.0005					
Test: INTOTPROB = EXTOTPROB		1/716	.05	.073	.787	NS

APPENDIX 25

RESULTS OF HYPOTHESIS 6.4, RESTRICTED SAMPLE

Results for Hypothesis 6.4: Test of the Interaction of Externalizing/Internalizing and Problem Severity in Predicting Number of Service Events, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 6.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in predicting number of service events attended.						
Model: TOTSESSN = (7.162)U (1.448)IN + (.010)INTOTPROB + (.014)EXTOTPROB + E	0067					
Test: INTOTPROB = EXTOTPROB		1/370	05	004	945	NS

APPENDIX 26

RESULTS OF HYPOTHESIS 9.1, UNRESTRICTED SAMPLE

Results for Hypothesis 9.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting Type of Termination, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.1. There is a significant interaction between Externalizing/ Internalizing and sex in differentiating between types of treatment termination.						
Model: TERMCODE = (7.889)U (.376)MIN + (4.623)MEX + (1.466)FIN + E	.0153					
Test: MIN - FIN = MEX - FEX		1/716	.05	2.564	.186	NS

APPENDIX 27

RESULTS OF HYPOTHESIS 9.1, RESTRICTED SAMPLE

Results for Hypothesis 9.1: Test of the Interaction of Externalizing/Internalizing and Sex in Predicting Type of Termination, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.1 There is a significant interaction between Externalizing/ Internalizing and sex in differentiating between types of treatment termination.						
Model: TERMCODE = (4.473)U (.900)MIN + (.540)MEX + (.475)FIN + E	.010					
Test: MIN - FIN = MEX - FEX		1/450	.05	.036	.848	NS

APPENDIX 28

RESULTS OF HYPOTHESIS 9.2, UNRESTRICTED SAMPLE

Results for Hypothesis 9.2: Test of the Interaction of Externalizing/Internalizing and Age in Predicting Type of Termination, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.2 There is a significant interaction between Externalizing/ Internalizing and age in differentiating between types of treatment terminations.						
Model: TERMCODE = (6.409)U (-2.887)IN + (.464)INAGE + (.361)EXAGE + E	.0095					
Test: INAGE = EXAGE		1/716	.05	.0742	.785	NS

APPENDIX 29

RESULTS OF HYPOTHESIS 9.2, RESTRICTED SAMPLE

Results for Hypothesis 9.2 Test of the Interaction of Externalizing/Internalizing and Age in Predicting Type of Termination, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.2 There is a significant interaction between Externalizing/ Internalizing and age in predicting GAF gain scores						
Model TERMCODE = (4.579)U (658)IN + (- 041)INAGE + (- 012)EXAGE + E	.0044					
Test INAGE = EXAGE		1/370	.05	.0879	.7671	NS

APPENDIX 30

RESULTS OF HYPOTHESIS 9.3, UNRESTRICTED SAMPLE

Results for Hypothesis 9.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting Type of Termination, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.3 There is a significant interaction between Externalizing/ Internalizing and family income in differentiating between types of treatment terminations.						
	.0083					
Model: TERMCODE = (9.241)U (-.797)IN + (.000)INFAMINC + (.000)EXFAMINC + E						
		1/716	.05	1.031	.310	NS
Test: INFAMINC = EXFAMINC						

APPENDIX 31

RESULTS OF HYPOTHESIS 9.3, RESTRICTED SAMPLE

Results for Hypothesis 9.3: Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting Type of Termination, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.3 There is a significant interaction between Externalizing/ Internalizing and family income in differentiating between types of treatment terminations.						
Model: TERMCODE = (9.241)U (-797)IN + (.000)INFAMINC + (.000)EXFAMINC + E	.0299					
Test: INFAMINC = EXFAMINC		1/370	.05	.986	.321	NS

APPENDIX 32

RESULTS OF HYPOTHESIS 9.4, UNRESTRICTED SAMPLE

Results for Hypothesis 9.4: Test of the Interaction of Externalizing/Internalizing and Problem Severity in Predicting Type of Termination, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in differentiating between types of treatment terminations.						
Model: TERMCODE = (5.378)U (2.363)IN + (.014)INTOTPROB + (.073)EXTOTPROB + E	.0055					
Test: INTOTPROB = EXTOTPROB		1/716	05	.463	.496	NS

APPENDIX 33

RESULTS OF HYPOTHESIS 9.4 RESTRICTED SAMPLE

Results for Hypothesis 9.4: Test of the Interaction of Externalizing/Internalizing and Problem Severity I Predicting Type of Termination, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 9.4 There is a significant interaction between Externalizing/ Internalizing and problem severity in differentiating between types of treatment terminations.						
Model: TERMCODE = (4.075)U (1.694)IN + (- 014)INTOTPROB + (.005)EXTOTPROB + E	.0056					
Test: INTOTPROB = EXTOTPROB		1/370	.05	.765	.382	NS

APPENDIX 34

RESULTS OF POST-HOC ANALYSIS, INTERACTION OF INTEXT AND FAMINC IN PREDICTING GAF GAINS, UNRESTRICTED SAMPLE

Results of the Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Interval Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: V_CHGAF = (4.974)U (-1.946)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	.0286					
Test: INFAMINC = EXFAMINC		1/265	.05	6.07	.0143	NS

APPENDIX 35

RESULTS OF POST-HOC ANALYSIS, INTERACTION OF INTEXT AND FAMINC IN PREDICTING GAF GAINS, RESTRICTED SAMPLE

Results of the Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Interval Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: V_CHGAF = (5.233)U (-.207)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	.0635					
Test: INFAMINC = EXFAMINC		1/160	.05	4.697	.031	NS

APPENDIX 36

RESULTS OF POST HOC ANALYSIS, INTERACTION OF INTEXT AND FAMINC IN PREDICTING GAF GAINS, UNRESTRICTED SAMPLE

Results of the Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Unrestricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.3 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: RCHGAF = (13.773)U (- 855)IN + (.000)INFAMINC + (- 000)EXFAMINC + E	.0287					
Test: INFAMINC = EXFAMINC		1/265	05	5.052	.0254	NS

APPENDIX 37

RESULTS OF POST-HOC ANALYSIS, INTERACTION OF INTEXT AND FAMINC IN PREDICTING GAF GAINS, UNRESTRICTED SAMPLE

Results of the Test of the Interaction of Externalizing/Internalizing and Family Income in Predicting GAF Gain Scores Reported as Rank-Ordered Data, Restricted Sample

Hypothesis and Tests	R2	df	Alpha	F	p	Sig*
Hypothesis 3.2 There is a significant interaction between Externalizing/ Internalizing and family income in predicting GAF gain scores.						
Model: RCHGAF = (13.831)U (-.031)IN + (.000)INFAMINC + (-.000)EXFAMINC + E	.0744					
Test: INFAMINC = EXFAMINC		1/160	.05	5.170	.0243	NS

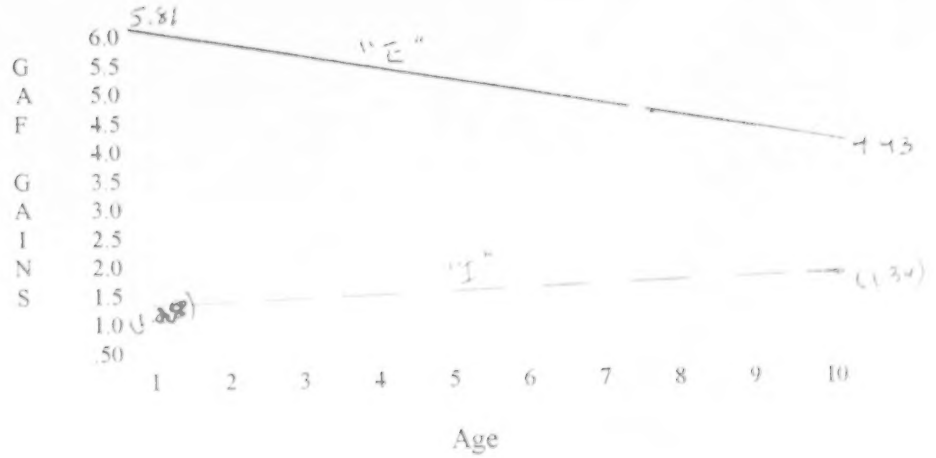

Figure 1 Externalizing versus Internalizing * Age in predicting GAF gains

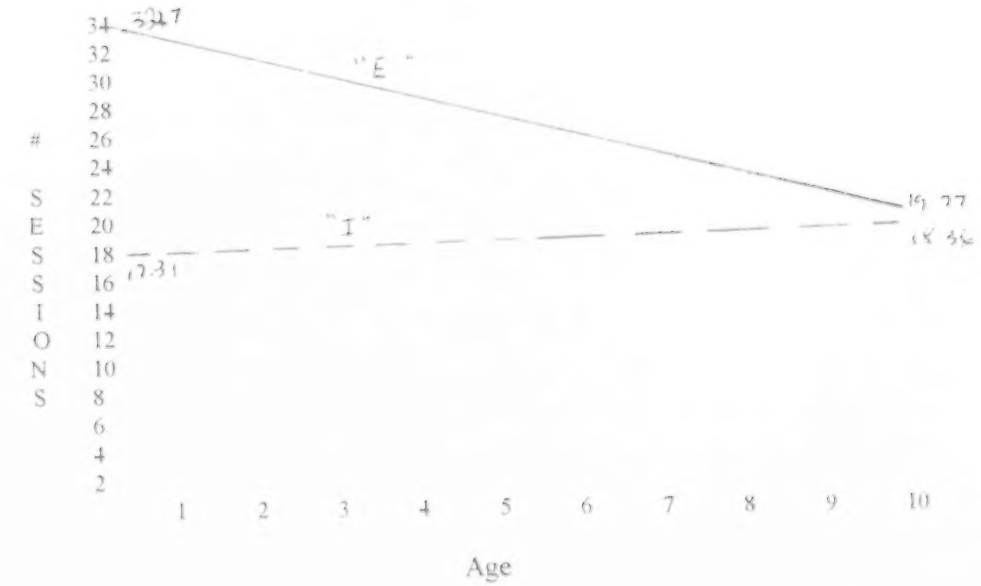

Figure 2 Externalizing versus Internalizing* Age in predicting Number of sessions

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